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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,404	10/18/2001	Hiromi Okitsu	51270-277015	8098

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EXAMINER

NOLAN, DANIEL A

ART UNIT	PAPER NUMBER
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2654

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DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,404

Applicant(s)

OKITSU, HIROMI

Examiner

Daniel A. Nolan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5,7,9,11 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5,7,9,11 and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

2. The filing of 28 May 2004 was entered to the following effect:
 - The proposed replacement drawing is accepted and the objection is withdrawn.
 - The specification was changed as indicated and the objections are withdrawn.
 - Claims 16-19 were added and examined on the merits.

Response to Arguments

3. Applicant's arguments filed 28 May 2004 have been fully considered but they are not persuasive.
 - In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., one "single" source) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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- In response to applicant's arguments that neither Launey et al nor Flanagan et al constitute relevant art, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).
- The issue that Launey et al does not speak to *transmitting locations* is further addressed by numerous examples (such as 1536 in figure 15b, line 2 column 23) clearly indicating that the source is being transmitted as a necessary requirement for abbreviated operation of devices not in the immediate vicinity as well as determination of device status.
- The argument (lines 4-5 of page 20 in the response) that "source" refers to speaker is in conflict with the previous arguments that "source" is location. The Examiner maintains the rejection that the "source" of the signal is identified and sent.
- The argument that prior art does not disclose transmitting the source location information to a remote terminal is not the case, as taught by Launey et al (column 15 line 15) with the examples of "different devices in different parts of the house" constituting "remote terminals".
- In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of

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ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, "a court or examiner may find the motivation to combine references in the nature of the problem to be solved." See *Ruiz v. A.B. Chance Co.* 03-1333.

- The assertion that Seidl teaches away from speech operation is not the case, as evidenced by the large number of speech-operated interfaces available and installed that permit hands-free operation for individuals with disabilities. Such interpretation would be contrary to legal mandates that make such possible operation required.
- In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim Rejections - 35 USC § 103

Launey et al & Flanagan et al

4. Claims 3-5, 7, 9, 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Launey et al (U.S. Patent 5,086,385 A) in view of Flanagan et al (U.S. Patent 5,737,485).

5. Regarding claim 3, the invention for an expandable home automation system by Launey et al reads on the feature of the claim for *an information apparatus for notifying output information to a remote terminal in response to an input signal of a sound*, as follows:

- Launey et al (with table 6 – see column 52 lines 36-47) reads on the feature of a *1st memory block configured to store characteristic data representing characteristics of various sounds (i.e. *.voc in lines 62-66) and a 2nd memory block configured to store various items of output information in correspondence to the characteristic data of the various sounds (i.e. *sct – speech control – and *.img in lines 59-62 & 67 through column 52 line 4)*. This structure conforms to the well-known practice of partitioning computer memory into discrete areas of *logical memory blocks*, thereby *such that each one of the items of the output information is associated to each sound* (see again column 53 line 2).
- Launey et al (10 in figure 1) further reads on *a controller device that operates according to the extracted characteristic data for addressing the 1st memory block and the 2nd memory block* (described above, to enable operation in column 13 lines

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13-18) *to identify one of the items of the output information corresponding to the collected sound (column 13 lines 42-66);*

- Launey et al (column 15 lines 37-43) also reads on the feature of *a transmitter device that transmits the identified one of the items of the output information to the remote terminal (column 7 lines 57-62) together with the detected source location of the sound (column 15 line 44), location* in some form – including circuit or channel employed – is an obvious and well-known distinguishing feature used to differentiate between similar devices in different locations.
- Where Launey et al employs a plurality of input devices (*microphones 64 in figure 1*) throughout the structure, these devices are intended to provide reception coverage for sounds from *multiple sources* and so do not apply on the feature of *collecting from a single source*.

The *microphone arrays and neural networks for speech/speaker recognition systems* of Flanagan et al (2 in figure 1) reads on the feature of *a plurality of input devices that are spatially distributed to collect the sound from a source location, and that respectively provide input signals of the same sound* and (column 9 lines 48-50) *a detector device that processes the input signals provided from the spatially distributed input devices to detect the source location of the sound* and including an *analyzer device (4 in figure 1) that extracts characteristic data from at least one of the input signals of the collected sound (16 in figure 1);*

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of

Flanagan et al to the device/method of Launey et al so as to mitigate environmental interference related to reverberation, ambient noise and mismatch between training and testing conditions.

6. Regarding claim 4, the limits of the claim are the same as those for claim 3. Launey et al (operating figure 15b in accord with column 28 lines 55-58) reads on the feature of a *canceller device configured to check whether the output information associated to the sound is true or false* (for example, see 878 in figures 8b-c) *according to the source location of the sound* (for example, see 792→794 in 7d and 412-424→figure 7m), *and to cancel transmission of the output information if the output information is false.*

7. Regarding claim 5, the limits of the claim are the same as those for claim 3. Launey et al does not disclose the details of audio recognition, so is silent as to the *analyzer device*. Flanagan et al (column 9 line 61 – column 10 line 13) reads on the feature *where the analyzer device is configured to analyze a frequency spectrum of the sound to extract therefrom a characteristic pattern* (or “network” of figure 9) *which is stored as the characteristic data in the 1st memory block* (with the “save” result of figure 9), *and the controller device is configured to use the characteristic pattern as an index to identify the one of the items of the output information corresponding to the sound* (see 14→4 in figure 11 with column 12 lines 1-2).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Flanagan

et al to the device/method of Launey et al so as to be able to determine whether a previously trained subject spoke the utterance.

8. Regarding claim 7, the limits of the claim are the same as those for claim 3.

Launey et al teaches the features of *a receiver device configured to receive the output information transmitted from the information apparatus* (column 15 lines 30-33); *a stimulator device*, (with either the *spoken messages* of column 23 line 48 to column 24 line 9, and/or the *monitor 56* of figure 1) that is *activated when the output information is received by the receiver device for physically stimulating a user of the remote terminal to draw attention of the user to the output information* (see column 9 line 65 through column 10 line 2); such monitor being a *display device that is configured to display the received output information such that the stimulated user can readily read the output information*.

9. Regarding claim 9, Launey et al teaches the feature of *addressing the 1st memory and the 2nd memory based on the extracted characteristic data so as to identify one of the items of the output information corresponding to the collected sound with the disclosure of table 6* (cited in response to claim 3), where the files in the logical memory blocks of *"*sct"* data and *"*.img"* commands operate in correspondence to the counterparts in the *"*.voc"* (column 52 lines 57-58, 67-68 & 63-66, respectively);

The remaining features of the claim are the same as those found in claim 3 and the claim is rejected for the same reason.

10. Regarding claim 11, Launey et al (column 13 lines 67 through column 14 lines 3) teaches the feature of *the medium containing program instructions executable by the central processing unit for causing the information apparatus to perform a process of notifying output information to a remote terminal in response to an input signal of a sound*. The remaining features of the claim are the same as those found in claims 3 and 9, and the claim is rejected for the same reasons.

11. Regarding claim 13 as understood by the Examiner, the features are the same as those found in claims 3 and 9, and the claim is rejected for the same reasons.

12. Regarding claim 14 as understood by the Examiner, Launey et al does not speak to the process of training or recognition; Flanagan et al (with the switch of 19 figure 1) teaches the feature of *a recognition mode of operation and a registration mode of operation, and said remote terminal includes a means for allowing a user to remotely select and set said mode of operation of said information apparatus*.

The remaining features of the claim are the same as those found in claims 3 and 9, and the claim is rejected for the same reasons.

13. Regarding claims 16, 17 and 18; the claims are set forth with the same limitations as claims 3, 9 and 11, respectively. Launey et al reads on the feature of the *remote terminal display* (requiring *format*) of either text, graphic, image, motion picture or combination (figures 10A - 10F and 12A - 12D – see column 55 lines 46-47).

Launey et al, Flanagan et al & Seidl

14. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Launey et al in view of Flanagan et al and further in view of Seidl ("Lighthouse™ for Windows – On-line Help screenprints", Seidl Computer Engineering, Inc. © 1993).

15. Regarding claim 3, the invention for an expandable home automation system by
Regarding claim 15, Launey et al reads on the feature that *the remote terminal is configured to display the output information in a format selected from the group consisting of text* (column 51 lines 41-7), *graphics* (column 51 line 16), *images* (the "*.icn" files of column 52 line 56). Since the table 6 (column 52 line 44-68) is provided as an *example*, and despite the well-known graphic display types of multimedia such as *.avi, *.mpg and the like being available for common use, neither Launey et al nor Flanagan et al disclose the use of motion in the display.

Seidl (last page 8 of the Lighthouse excerpts) reads on the feature of *motion picture and combinations thereof* with their product in which the images change to reflect the operation of the devices, such that it would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Seidl to the device/method of Launey et al & Flanagan et al so as to reflect the actual state of the device by providing the element of *motion* to the *pictures* disclosed by Launey et al such that, with the figures 10c-d (where the hands of the clock would move in accord with a setting by voice), figures 10e-f (where the moon phase would be expected to move as the time is set) and figures 12c-12f (where the symbols for lights, screen and etc. change as is done by Seidl).

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, supervisor Richemond Dorvil can be reached at (703)305-9645.

The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal

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communications as "EXPEDITED PROCEDURE". Formal response to this action may be faxed according to the above instructions,

or mailed to: Mail Stop AF (or CPA, etc. – see Official Gazette, 04 November 2003)
P.O. Box 1450
Alexandria, VA 22313-1450

or hand-deliver to: Crystal Park 2,
2121 Crystal Drive, Arlington, VA,
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan
Examiner
Art Unit 2654

DAN/d
June 15, 2004


RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER